"K. O. Lee"

Expanding Mandrels

Perfected for: • MILLING • TURNING • GRINDING

A time-tested tool for grinding, turning and milling operations on the production line, in the tool room, maintenance, repair or home work shop. "K. O. Lee" Expanding mandrels will hold work from thin sleeves and bushings to heavy castings and forgings. Sizes to fit ⅜ to 5½ inch hole.

AVAILABLE IN TWO SERIES

GENERAL PURPOSE SERIES Five mandrels with range from ⅜ to 2½ inch hole. Recommended for tool room, home shop and light production work.

HEAVY-DUTY SERIES Range from 11/16 to 5½ inch hole. Recommended for production line operations including heavy roughing cuts.

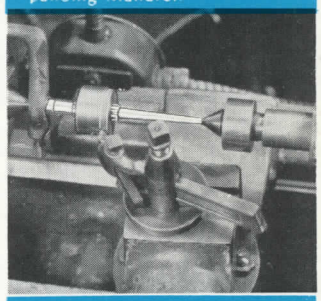
FEATURES

LARGE BEARING SURFACE on all sleeves provides a positive grip on heavy jobs . . . prevents slip and chatter and holds thin sleeves and bushings without distortion. Work can be held in any position on sleeve and may overhang either or both ends for facing operations.

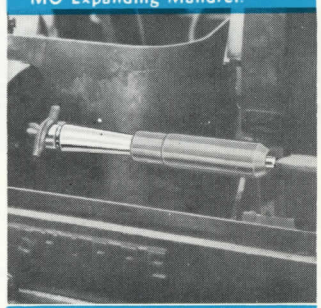
PRECISION GROUND arbors and sleeves provide accuracy of .001 inch or better. Large bearing surfaces minimize wear.

AUXILIARY CENTERS (right end of above illustration) are a "K. O. Lee" feature which provide: large bearing surface, oil reservoir, prevent damage to arbor center, prolong arbor life and are inexpensive to replace.

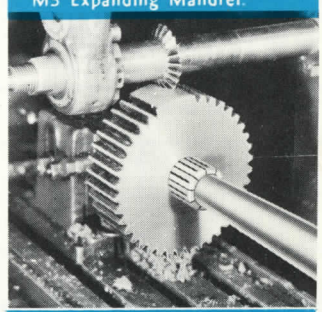
Production turning 45° on 11 lb casting held on M46 Expanding Mandrel.



Turning small piece in tool room I. D. 15 32" held on MO Expanding Mandrel.

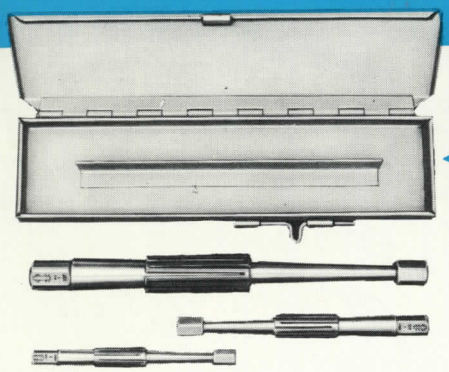


Grinding 45° angle holding .001" concentricity. Using M3 Expanding Mandrel.



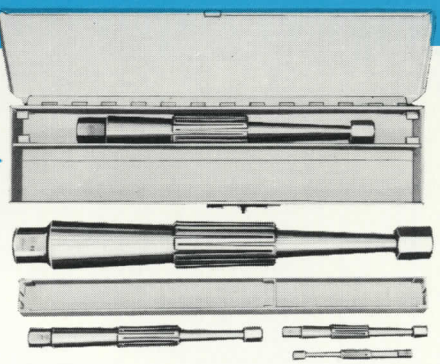
Milling Gear held on "K. O. Lee" Expanding Mandrel Ideal for Tool Room use.

FOR REPAIR SHOP · TOOL ROOM · PRODUCTION



MANDREL SETS

M90 M101



All "LEE" Expanding Mandrel Sets are packed in sturdy, Silvergray Hammerloid finish metal boxes to protect them from damage and loss.

YOU CAN GET *"K. O. Lee"* EXPANDING MANDRELS SINGLY OR IN SETS

There is a "K. O. Lee" Expanding Mandrel Set for every shop. General Purpose and Heavy Duty Mandrel sets cover a wide range of hole size and are ideal for tool room, maintenance and repair shop, and job shop. Any Expanding Mandrel may be purchased separately for production operations. A full set of "K. O. Lee" Expanding Mandrels will eliminate making and stocking straight arbors for every job.

"K. O. LEE" EXPANDING MANDREL SETS GENERAL PURPOSE

M90 Three smallest general purpose mandrels—M0, M1, M2 and M201B Box—range 3/8" to 1"—shipping wt. 3 lbs.
M100 Four general purpose mandrels—M0, M1, M2, M3 and M101B Box—range 3/8" to 1 3/16"—shipping wt. 9 lbs.
M100W Same as M100 less auxiliary centers
M100X Three general purpose mandrels—M1, M2, M3 and M201B Box—range 1/2" to 1 3/16"—shipping wt. 9 lbs.
M101 Largest general purpose set—M0, M1, M2, M3, M4 and M101B Box—range 3/8" to 2 1/2"—shipping wt. 18 lbs.
M101W Same as M101 less auxiliary centers

HEAVY DUTY

M200 Four mandrels; two heavy duty—M0, M1, M25, M26 and M201B Box—range 3/8" to 1"—shipping wt. 4 lbs.
M200W Same as M200 less auxiliary centers
M200X Four mandrels; two heavy duty—M1, M2, M35, M36 and M101B Box—range 1/2" to 1 3/16"—shipping wt. 12 lbs.
M201 Two heavy duty mandrels—M35, M36 and M201B Box—range 1" to 1 3/16"—shipping wt. 8 lbs.
M201W Same as M201 less auxiliary centers
M202 Two heavy duty mandrels—M45, M46 and M101B Box—range 1 3/16" to 2 1/2"—shipping wt. 21 lbs.
M202W Same as M202 less auxiliary centers

MANDREL BOXES

M201B Box for sets M90-M200-M200W-M201-M201W-M100X
M101B Box for sets M100-M101-M100W-M101W-M202-M202W-M200X

SPECIFICATIONS OF *"K. O. Lee"* EXPANDING MANDRELS

	COMPLETE MANDRELS				ARBORS ONLY					SLEEVES ONLY				AUXILIARY CENTERS	
	NO.	RANGE INCHES	WEIGHT POUNDS	PRICE	NO.	LENGTH INCHES	TAPER PER FT.	WEIGHT POUNDS	PRICE	NO.	LENGTH INCHES	WEIGHT POUNDS	PRICE	NO.	PRICE
GENERAL PURPOSE	M0	3/8 to 1/2	3/16		M0A	4 1/2	5/8"	1/8		M0S	1 1/4	1/32		M0AC	
	M1	1/2 to 11/16	3/8		M1A	5 3/4	.775"	1/4		M1S	1 1/2	1/16		M1AC	
	M2	11/16 to 1	1		M2A	9 1/4	3/4"	3/4		M2S	2 1/2	1/8		M2AC	
	M3	1 to 1 9/16	2 3/4		M3A	12 1/4	15/16"	2 1/4		M3S	3	3/8		M3AC	
	M4	1 9/16 to 2 1/2	9		M4A	16 3/4	1 1/8"	7 1/2		M4S	4 1/4	1 1/4		M4AC	
HEAVY DUTY MANDRELS	M25	11/16 to 27/32	3/4		M25A	8	1/2"	1/2		M25S	2 1/4	1/8		M25AC	
	M26	27/32 to 1	1 1/8		M26A	8 1/4	1/2"	3/4		M26S	2 1/2	3/16		M26AC	
	M35	1 to 1 9/32	2 3/4		M35A	12 1/4	1/2"	2		M35S	3 1/4	1/4		M35AC	
	M36	1 9/32 to 1 9/16	4		M36A	12 1/4	1/2"	2 3/4		M36S	3 1/4	9/16		M36AC	
	M45	1 9/16 to 2 1/32	6 3/4		M45A	15 1/2	5/8"	5 1/4		M45S	4 1/4	13/16		M45AC	
	M46	2 1/32 to 2 1/2	16 3/4		M46A	15 1/2	5/8"	8 3/4		M46S	4 1/4	1 1/2		M46AC	
	M5B	2 1/2 to 3 1/4	17 1/4		M5A	17 3/4	1 1/8"	12 1/4		M5S	7	5		M5AC	
	M5C	3 1/4 to 4	30 1/4		M5-6A	18	1 1/8"	25 1/4		M5S	7	5			
	M55	3 1/4 to 4 3/4	42 1/4		M5-6A	18	1 1/8"	25 1/4		M5S M6S	7 7	5 12		M6SC	
	M6B	4 to 4 3/4	38		M5-6A	18	1 1/8"	25 1/4		M6S	7	12		M6SC**	
	M6C	4 3/4 to 5 1/2	53		M6A	18 1/4	1 1/8"	40		M6S	7	12		M6SC**	
	M5	2 1/2 to 4	42 1/2		M5A M5-6A	17 3/4 18		37 1/2		M5S	7	5		M5AC	
	M6	4 to 5 1/2	78		M5-6A M6A	18 18 1/4		65 1/4		M6S	7	12		M6SC**	
	M7	2 1/2 to 5 1/2	94 1/2		M5A M5-6A M6A	17 3/4 18 18 1/4		77 1/2		M5S M6S	7 7	5 12		M6SC M5AC	

**M6SC is a clamp for compressing sleeve M6S.

INSTRUCTIONS: If an auxiliary center sticks on the arbor, use a wrench to loosen it; don't hammer it loose! Oiling the hole of the auxiliary center will help to alleviate this difficulty.